

ABSTRACT

A sensor for determining the presence of an analyte in a test sample, said sensor comprising a nanoparticulate membrane comprising nanoparticles of at least one inorganic oxide of an element selected from Group IA, IIA, IIIA, IVA, IB, IIB, IIIB, IVAB, VB, VIB, VII3 or VIII3 of the Periodic Table, and wherein an oxidoreductase and an electrochemical activator are diffusibly dispersed in said nanoparticulate membrane. An electrically non-conductive, nanoparticulate membrane comprising nanoparticles of at least one inorganic oxide of an element selected from Group IA, IIA, IIIA, IVA, IB, IIB, IIIB, IVAB, VB, VIB, VIIB or VIIIB of the Periodic Table, and wherein an oxidoreductase enzyme and a polymeric redox mediator capable of transferring electrons are diffusibly dispersed in said nanoparticulate membrane.